DOCUMENT RESUME

ED 093 233 HE 005 677

AUTHOR	Chewning, June S.
TITLE	Nuclear Engineering Enrollment and Degree Survey: Enrollments - Fall 1972; Degrees Granted - July 1965-June 1972.
INSTITUTION	Atomic Energy Commission, Oak Ridge, Tenn. Div. of Nuclear Education and Training.
REPORT NO	WASH-1228(73)
PUB DATE	May 73
NOTE	32p.
EDRS PRICE	MF-$0.75 HC-$1.85 PLUS POSTAGE
DESCRIPTORS	Bachelors Degrees; *Degrees (Titles); Doctoral Degrees; *Engineering; *Enrollment Trends; *Higher Education; *Masters Degrees; Nuclear Physics; Statistical Data
IDENTIFIERS	*Nuclear Engineering

ABSTRACT

The Atomic Energy Commission's survey of nuclear engineering degrees granted during the 1971-72 academic year shows a continuing increase in bachelor's recipients, a slight increase in the number of master's, but a continuing decline in new Ph.D.'s. If the present rate of decline persists, by 1974 the number of new Ph.D.'s in the field will be below the output in 1965-66. There is little likelihood that a turnaround will be experienced, and fewer new Ph.D.'s can be expected each year for several years to come. Fall enrollments indicate a continuing increase at the bachelor's degree level, at least through 1972-73. Programs for undergraduates in nuclear engineering have developed rapidly during the past several years. This development can be expected to stabilize now as fewer institutions introduce the option at this level. Forty-six institutions have undergraduates majoring in nuclear engineering or taking a nuclear option within other engineering degree programs. Projecting from fall 1972 enrollments, it appears that the yearly output of master's degrees may have leveled off from a generally increasing production since 1965-66, and may be expected to decline slightly in 1972-73. Included in the fall of 1972 survey was a questionnaire regarding placement of graduates. Apparently, little difficulty was found at all levels in placing graduates in this country, including a high percentage of the foreign nations. (Author/MJM)

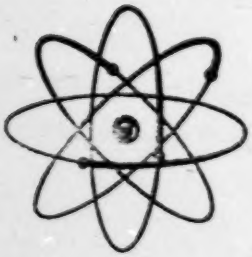
WASH-1228(73)

ED 093233

NUCLEAR ENGINEERING ENROLLMENT AND DEGREE SURVEY

ENROLLMENTS-FALL 1972

DEGREES GRANTED JULY 1965-JUNE 1972



U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

HE 005 677

UNITED STATES ATOMIC ENERGY COMMISSION
Division of Nuclear Education and Training

MAY 1973

In the fall of 1971 the U.S. Atomic Energy Commission began developing data on the numbers of nuclear-trained personnel that could be expected to enter the labor market yearly. Efforts were focused on the two categories of nuclear education in which accurate forecasts were needed for the management of AEC-supported education programs and in which there existed a threat that shortages might occur (radiation protection personnel and nuclear engineers, including other engineers with nuclear option). Interest in the results of these surveys was so great that the decision was made to publish the data for distribution to the participating institutions, other segments of the AEC and its contractors, interested Federal agencies, and other requesting organizations. *Raditation Protection Enrollment and Degree Survey*, WASH-1229 (1972) and *Nuclear Engineering Enrollment and Degree Survey* WASH-1228 (1972) resulted and were distributed in late fall 1972.

This 1973 publication includes the cumulative data published in the fall 1972 engineering survey, updated and modified to include historical and current information from the Air Force Institute of Technology, which had not been included originally. Also in the current survey is information regarding placement of graduates. This was added to the questionnaire, printed herein as Appendix E, at the suggestion of a number of the participating institutions and users.

The AEC is grateful to the institutions surveyed and listed in Appendix A for the extraordinary 100 percent response in both years and to June S. Chewning who, under the direction of Earle W. Cook, developed the survey questionnaires and produced this report.

Elliot S. Pierce, Director
Divison of Nuclear Education
and Training

SUMMARY

The Atomic Energy Commission's survey of nuclear engineering degrees granted during the 1971-72 academic year shows a continuing increase in bachelor's recipients, a slight increase in the number of master's, but a continuing decline in new Ph.D.'s. If the present rate of decline persists, by 1974 the number of new Ph.D.'s in the field will be below the output in 1965-66. There is little likelihood that a turnaround will be experienced, and fewer new Ph.D.'s can be expected each year for several years to come.

Fall enrollments indicate a continuing increase at the bachelor's degree level, at least through 1972-73. Programs for undergraduates in nuclear engineering have developed rapidly during the past several years. This development can be expected to stabilize, now, as fewer institutions introduce the option at this level. Forty-six institutions have undergraduates majoring in nuclear engineering or taking a nuclear option within other engineering degree programs. Forty of these institutions awarded B.S.'s in 1971-72.

Projecting from fall 1972 enrollments, it appears that the yearly output of master's degrees may have leveled off from a generally increasing production since 1965-66, and, in fact, may be expected to decline slightly in 1972-73. Such a decline could continue, especially if nuclear engineering programs or departments are forced out of existence at some of the institutions.

Included in the fall of 1972 survey was a questionnaire regarding placement of graduates. Apparently, little difficulty was found at all levels in placing graduates in this country, including a high percentage of the foreign nationals. Industry employed the largest percentage at all levels, the second largest group of new Ph.D.'s went into academic employment, and the second largest group of new bachelor's and master's holders continued for further study.

DOCTORAL DECLINE

Degrees. The projection of a slight increase in the number of Ph.D.'s to be granted in 1971-72 in nuclear engineering proved to be optimsitic.[1] The actual output was 149, considerably below the previous year's 171, and a greater decline than the 1970-71 drop of 10 from 1969-70. (See Figure 1 and Appendix A.) Several factors contributed to this over optimism.

(1) Projections were based upon the experience of AEC's fellows and trainees. For other students, however, continuous full-time study toward the Ph.D. is not the usual pattern, as students without this financial support are more likely to combine full-time and part-time or even intermittent study during the years that they are pursuing the degree. This considerably extends the time lag between initial enrollment and receipt of the degree. Therefore, a smaller percentage of the enrollment at a given time can be expected to receive degrees than was anticipated in the projection.

(2) In 1971-72, the time lag was extended even beyond normal because of other factors, not the least of which was what may be termed "placement panic," Candidates, including some in the terminal year, dropped out to accept job offers for fear that the offers might not be forthcoming by the time they were through with degree work. The publicity concerning unemployed engineers created panic even among some of the most academically and financially secure students. In at least one case reported to the AEC, a student in his terminal year of Ph.D. work and assured of fellowship support dropped out to accept a position offer because of the job market scare.

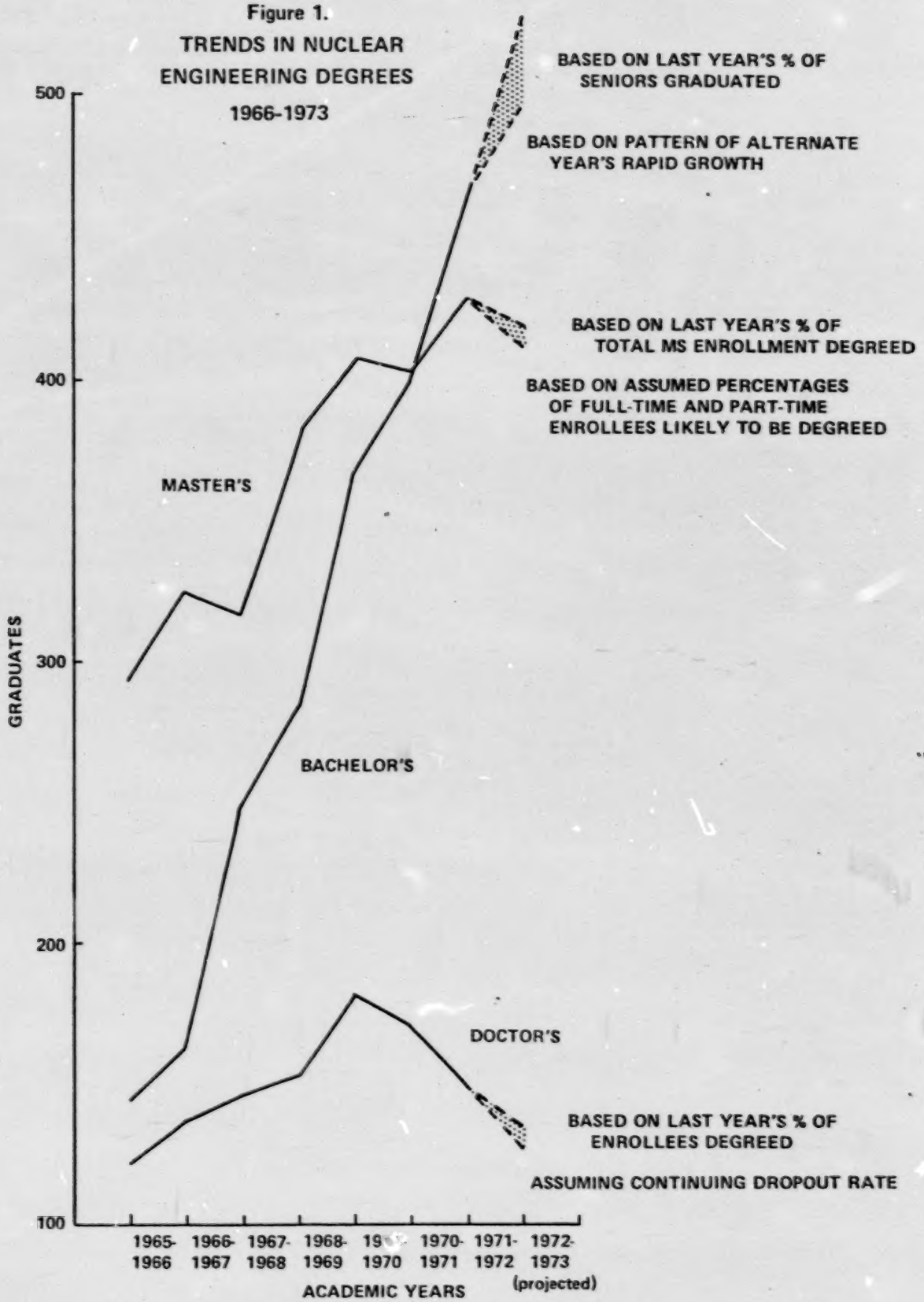
(3) The drop in Federal support of graduate students through fellowships, traineeships, and research grants forced more-than-normal numbers to drop from full-time to part-time studies. In order to support themselves financially, students initially enrolled full-time changed to part-time study and accepted positions as graduate assistants, research assistants, teaching fellows, or off-campus part-time employment, which will postpone the date when they can claim their degrees. Aside from the financial considerations, also playing a part in this shift to part-time study was the placement panic mentioned above. In situations where the university is located in the proximity of nuclear employers, candidates would accept part-time work with a company on the foot-in-the-door theory that they would assure future employment. Expediency in obtaining the degree was sacrificed for job security of the future.

---

[1] U.S. Atomic Energy Commission, *Nuclear Engineering Enrollment and Degree Survey*, November 1972, p. 4.

Figure 1.

TRENDS IN NUCLEAR ENGINEERING DEGREES 1966-1973



The Future. Even more significant than the relatively large decline in new Ph.D.'s is the enrollment decrease shown by the fall 1972 figures, which reflect a considerable drop-out rate among those enrolled previously. Many institutions reported fewer enrollees in the fall of 1972 than the number enrolled in 1971[2] less the number who were graduated during the year. The drop in full-time Ph.D. enrollment exceeds 11 percent, from 573 in 1971 to 509 in 1972, adjusted to include the Air Force Institute of Technology. Although part-time enrollment increased by 13 percent, the overall drop is nearly 7 percent (see Appendix B).

While full-time enrollments in nuclear engineering have dropped, the number of foreign nationals among the enrollees has remained about the same, resulting in a larger percentage of foreign nationals among enrollees than before. Of the fall 1971 full-time enrollees, 172 or 30 percent were foreign nationals; 170 or 33 percent of the 1972 full-time enrollees are foreign nationals. About 25.5 percent of all (full- and part-time) nuclear engineering Ph.D. enrollees in 1971-72 were foreign nationals and about the same percentage were among those receiving degrees by June 30, 1972. The most important aspect is that at least half of the noncitizens found employment in this country. In an over-all tight job market, a heavy employment rate among foreign nationals indicates that the need for Ph.D. nuclear engineers remains; otherwise, work visas could not have been approved for noncitizens.

The outlook for the immediate future for the supply of nuclear engineering Ph.D.'s appears to be all downhill. With fewer U.S. citizens continuing to the Ph.D. level, and foreign students drawn home by increasingly improved job opportunities and brighter economic conditions in many of their home countries, a close watch on the demand for new Ph.D.'s must be maintained, or the country might be faced with a situation in which even attritional requirements cannot be met, much less requirements for growth in a vital industry and the supporting research activities. Some 110 students, most of them Ph.D. candidates, are presently supported by AEC traineeships and fellowships. All such support will be terminated before July 1, 1974, and, as these students leave the campuses, they will probably not be replaced. Ph.D. enrollments can thus be expected to decline further.

It is possible that some may be able to accelerate in order to finish before the support runs out. In which case, the rate of decline in the Ph.D. output could be slowed for one or two years. It is also possible, however, that some who were enrolled in Ph.D. programs in the Fall of 1972, and have the option, might elect to accept a master's degree rather than find themselves with no advanced degree after having expanded so much time, but lacking financial support to continue. Regardless of any temporary changes in output brought about by these forces, the number of Ph.D.'s in nuclear engineering can be expected to continue to drop over the next few years, and should be below the 1966 level of 122 by 1974 (see Figure 1).

Nuclear to All Engineering Ph.D.'s The number of Ph.D.'s granted in all engineering fields reached an all-time high in 1971-72,[3] but the percentage who specialized in nuclear engineering hit a low of 3.95 percent (see Table 1). Ph.D. enrollments in engineering in general as well as the percentage of those enrolled with nuclear specialty declined for the second time in the fall of 1972.

Placement. As a result of numerous requests from users of our first survey effort, a supplemental form has been added to the questionnaire to gather information regarding the placement of nuclear engineering graduates. Institutions which accounted for all but three of the Ph.D.'s returned completed forms. Industry was by far the largest employer of new Ph.D.'s, taking 40 percent of those reported (see Table 2 and Figure 2). The next larger group, 18 percent, went into academic employment, with Government-owned, contractor-operated installations (GOCO; i.e., national laboratories) taking 15 percent. The U.S. Government employed eight percent of the new Ph.D.'s; the military, six percent; and state, local and foreign governments, four percent. The placement of seven percent was not known to the reporting institutions.

It is interesting to note that the Federal Government, which has traditionally been the most generous supporter of graduate education in the nuclear field, employed relatively few of the graduates, either directly or indirectly through its contractors.

MASTERS

Degrees. The 428 master's degrees granted in nuclear engineering in 1971-72 were about the number expected and fell within the range of projections (405 to 450) made in our previous survey. Had it not been for the addition of the Air Force

[2] *Ibid.*, Appendix C.

[3] Engineering Manpower Commission, Engineer Joint Council, *Engineering and Technology Graduates-1972.*

TABLE 1

NUCLEAR ENGINEERING DEGREES, 1966-1972 AND FALL ENROLLMENTS, 1971-1972 AS A PERCENTAGE OF ALL ENGINEERING

DEGREES Year Ended June 30	BACHELOR'S All Eng.	BACHELOR'S Nuc. Eng.	BACHELOR'S % Nu /All	MASTER'S All Eng.	MASTER'S Nuc. Eng.	MASTER'S % Nu /All	DOCTOR'S All Eng.	DOCTOR'S Nuc. Eng.	DOCTOR'S % Nu /All
1966	35,815	145	0.40	13,677	294	2.15	2,303	122	5.30
1967	36,186	164	0.45	13,887	325	2.34	2,614	137	5.24
1968	38,002	249	0.66	15,152	317	2.09	2,933	146	4.98
1969	39,972	284	0.71	14,980	381	2.55	3,345	153	4.58
1970	42,966	367	0.85	15,548	407	2.62	3,620	181	5.00
1971	43,167	399	0.92	16,383	403	2.46	3,640	171	4.70
1972	44,190	464	1.05	17,356	428	2.47	3,774	149	3.95
ENROLLMENTS									
Full-time	UNDERGRADUATE			MASTER'S			DOCTOR'S		
1971									
(Jr.)	48,543	623	1.28	22,405	720	3.21	14,100	573	4.06
(Sr.)	51,377	578	1.13	–	–	–	–	–	–
1972									
(Jr.)	45,874	633	1.38	22,877	717	3.14	13,460	509	3.79
(Sr.)	49,895	667	1.34	–	–	–	–	–	–
Part-time	(graduate students [both master's and doctor's])								
1971	–	–	–	27,302	341	1.25	–	–	–
1972	–	–	–	24,940	344	1.38	–	–	–

NOTE: Nuclear Engineering Degrees do not include those in Nuclear Engineering with a Health Physics or similar option; these are reported in AEC's Survey of Radiation Protection Enrollments and Degrees.

SOURCE: Data for All Engineering Degrees and Enrollments from *Engineering and Technology Graduates, 1972,* and *Engineering and Technology Enrollments, Fall 1972,* respectively, by the Engineering Manpower Commission of Engineers Joint Council, March 1973.

TABLE 2

PLACEMENT OF 1971-72 NUCLEAR ENGINEERING DEGREE RECIPIENTS (REPRESENTS 98% OF TOTAL DEGREES AWARDED)

Placement or plans after graduation	Degree Recipients July 1971-June 1972 Bachelor No.	Bachelor %	Master No.	Master %	Doctorate No.	Doctorate %
a. Further study	136	30	119	28	3	2
b. Academic employment	2	*	3	1	26	18
c. U.S. Government employment	14	3	22	5	12	8
d. Gov.-owned, Contractor-operated installation employment	12	3	18	4	21	15
e. State, Local, and Foreign Government employment	0	*	8[1]	2	5[1]	4
f. Industry employment	153	33	170	41	57	40
g. Military service	45	10	48	11	9	6
h. Unknown	98	21	31	7	10	7
Total Reporting	460		419		143	

* Less than 1%

[1] 2 M.S. and 3 Ph.D. recipients to Foreign governments

Institute of Technology to the survey, the total M.S.'s granted would have been nearer the lower level of that projection, however.

Enrollments and the Future. The fall 1972 enrollment of 911 is below the previous year's 928 (adjusted to include AFIT) and indicates an output of 412 to 420 new M.S. nuclear engineers by June 30, 1973, based upon the 1971-72 rate of completion. However, the diminished support for graduate study could, as explained above, influence the M.S. output upward slightly. Any such variation will be short-lived, however, and the future can be expected to produce no increase in the output of M.S.-level nuclear engineers.

Foreign Nationals. Foreign nationals among the full-time M.S. enrollment in the fall of 1972 increased in number (from 125 to 137) and in percentage (from 17.4 to 19.1) over the fall of 1971. The 58 foreign nationals who received degrees in 1971-72 were about the same number as in the previous year (57).

Placement. Response to the placement questionnaire was excellent, with institutions accounting for 98 percent of the M.S. degree recipients responding. The post-degree placement of all but seven percent of their graduates was known to the reporting institutions. Industry employed 41 percent of the M.S.-level nuclear engineers. Eleven percent went into military service, and the U.S. Government employed five percent. Government owned, contractor-operated installations employed another four percent, and two percent went to state, local and foreign governments. Few entered academic employment, but 28 percent went on for further study.

Implications in Ph.D. Enrollment. The report of 119 master's degree recipients who went on to further study creates an interesting situation when viewed against the decrease in Ph.D. enrollments reported above. The Ph.D. enrollment of 706 in the fall of 1971 produced 149 graduates by June 1972, theoretically leaving 557 candidates yet enrolled in Ph.D. programs. Ph.D. candidates in the fall of 1972 numbered 659, which would mean 102 newly enrolled Ph.D. aspirants, assuming that all of the previous ungraduated candidates remained. However, assuming that the reported 119 M.S. recipients continued for further study in the same field, the deficit of 17 is another indication of the considerable drop-out rate at the Ph.D. level, rather than merely a decline in first-time enrollments.

Nuclear to Total Engineering. As shown in Table 2, master's recipients in nuclear engineering totaled 2.47 percent of all engineering master's recipients in 1971-72, about the same as the 1970-71 portion of 2.46 percent. Nuclear types made up 3.14 percent of engineering enrollments in that degree level in the fall of 1972, compared to 3.21 percent the year before.

BACHELORS

Degrees. As projected, the number of new B.S. engineers with nuclear specialty continued to increase rapidly to 464, 3.5 times the output in 1966 (see Figure 1).

Placement. As at other levels, industry was the chief employer and took one-third of the graduates. Thirty percent went on to further study, and ten percent went into military service. The U.S. Government and GOCO facilities employed three percent each. Academia and state and local governments did not employ significant numbers. Record keeping for B.S. graduates is not as thorough as for persons taking advanced degrees; the whereabouts of 21 percent were unknown to the reporting institutions, and, in fact, some institutions had placement information only for those continuing to graduate school. As financial support for graduate study diminishes, far fewer than the 30 percent can be expected to continue for graduate study (see Table 2).

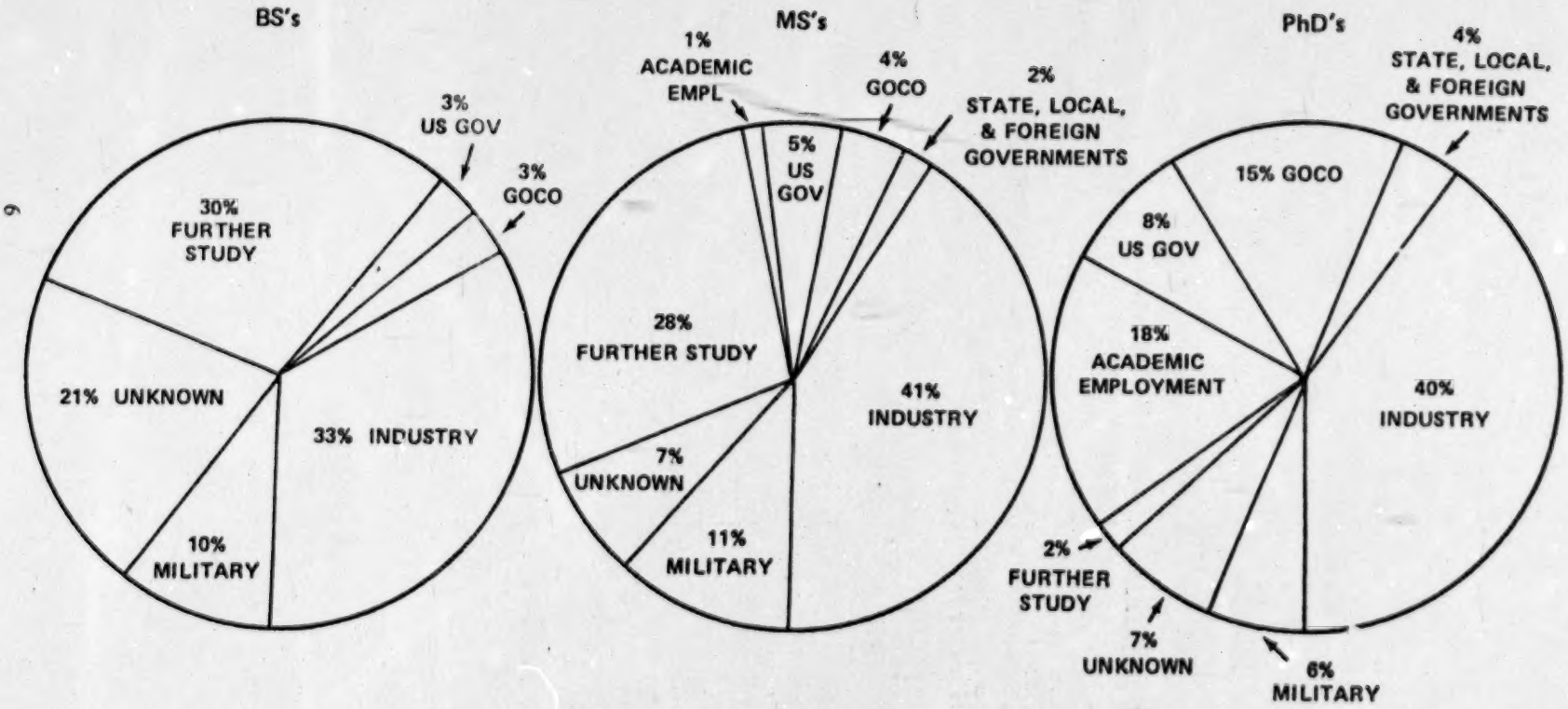
Foreign Nationals. Foreign nationals represent no more than three percent of B.S. degree recipients or enrollees.

Nuclear to All Engineering. The percentage of all engineering students at the B.S. level who obtained degrees with nuclear specialty in 1971-72 continued to increase—1.05 percent compared to 0.92 percent in 1970-71. The number of juniors and seniors specializing in nuclear engineering continued to increase in number and, in the face of decreased overall engineering enrollments at these levels, in percentage of all engineering. (See Table 1.)

The Outlook. Freshman fall enrollments in engineering have been dropping for several years, with the most drastic drop occurring in the fall of 1971. The effect of this large decline should become apparent in the Nuclear Engineering Survey in the fall of 1973, when the entering freshmen of 1971 would normally be expected to become juniors. Overall engineering enrollment has been declining at the junior level since 1967, and at the senior level since 1970. AEC's information on nuclear enrollment dates back only to the fall of 1971, but the fall of 1972 enrollments showed an increase at both levels over the previous year. If the 1972-73 senior students

Figure 2

NUCLEAR ENGINEERING GRADUATE PLACEMENT
1971-1972



graduate at the same rate as the 1971-72 group, there should be nearly 535 new B.S. nuclear engineers by June 30. However, referring to Figure 1 again, the growth rate has exhibited a pattern of a large increase one year followed by a lesser increase the next. A large increase was experienced in 1972 so that the 1973 output might be expected to be nearer 500, if the growth pattern persists.

After 1973, it is likely that the rapid rate of growth at the B.S. level will end. If the 46 institutions which presently have students enrolled in undergraduate nuclear engineering programs (and it is unlikely that many additional institutions will begin undergraduate programs) continue with their present level of enrollment, even though engineering enrollments are generally falling off, the leveling off in output of B.S. nuclear engineers will be around 500 per year. The fall of 1972 junior enrollment (633) is only slightly above the fall of 1971 (623), but senior enrollment (667) exceeds not only the 1971 senior enrollment (578) but also the 1971 junior enrollment. This can be explained by the fact that some institutions report that course of study in all the engineering curriculums is very much the same until the fourth year, when the specialization is determined or switches can still occur. If the fall of 1973 brings an increase in senior enrollments over the juniors reported in the fall of 1972, then one more year of increased output at the bachelor's level might be expected.

PROGRAM OFFERINGS

Although other surveys exist which report on enrollments and degrees in nuclear engineering, they do not include the nuclear engineering programs which are lost in more general terms. Appendix B shows the enrollments (fall 1972) and degrees (1971-72) by institution and by subfield. Appendix C summarizes this information by subfield. You will note that, following the pristine nuclear engineering degree, mehanical engineering with a nuclear option is the next larger category, followed, in order, by electrical engineering and chemical engineering.

Appendix D shows what institutions offer each option. Although one may question whether some of the options listed are sufficiently nuclear engineering-oriented, it is felt that the reporting official is best able to make this judgment, and the complete information regarding numbers and options is given to be used or stripped out as the reader sees fit. In most cases the information is presented as submitted by the institution. Some adjustments were necessitated to eliminate obvious misinterpretations, usually after checking with the institution by telephone, or to correct typographical or arithmetic errors.

APPENDIX A

NUCLEAR ENGINEERING
DEGREES GRANTED 1965-1972
By Institution

B=Bachelor
M=Master
D=Doctorate

State and Institution	July-June-	1965-1966			1966-1967			1967-1968			1968-1969			1969-1970			1970-1971			1971-1972		
		B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D
Alabama																						
Tuskegee Institute		-	-	-	-	2	-	-	2	-	-	2	-	-	2	-	-	2	-	-	-	-
Arizona																						
*Arizona State University		3	-	-	5	1	-	6	-	-	4	-	-	3	1	-	6	1	-	5	2	-
University of Arizona		-	7	3	-	5	-	4	4	-	4	6	5	14	5	5	13	6	8	8	2	-
California																						
California State Univ.-San Jose		4	-	-	8	-	-	8	-	-	7	-	-	8	-	-	-	-	-	7	-	-
Stanford University		-	11	6	-	7	6	-	11	6	-	12	2	-	30	5	-	13	2	-	8	1
University of California - Berkeley		-	15	5	-	27	7	-	24	12	-	26	5	-	16	11	-	22	10	3	28	10
- Davis		-	-	-	-	-	2	-	-	1	-	-	2	-	-	2	-	-	1	-	-	2
- Los Angeles		-	7	2	-	4	3	-	3	6	-	7	3	-	8	5	15	6	5	-	9	6
- Santa Barbara		First Degree Awarded 1970-1971															1	1	-	8	1	-
District of Columbia																						
Catholic University		-	6	-	-	5	-	-	5	1	-	11	1	-	6	3	-	12	2	-	-	2
Howard University		-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	2	-	-	1	-
Florida																						
University of Florida		-	8	4	-	9	4	4	3	7	16	11	4	15	10	7	15	7	4	11	15	1
Georgia																						
Georgia Inst. of Technology		-	7	2	-	6	3	-	12	-	-	26	2	-	19	3	-	19	9	-	32	7
Idaho																						
Idaho State University		-	-	-	2	-	-	6	-	-	5	2	-	9	4	-	8	1	-	6	2	-
University of Idaho		8	1	-	14	2	-	9	3	1	7	1	-	9	2	-	11	4	1	8	3	-
Illinois																						
Northwestern University		-	-	1	-	3	1	2	-	1	1	5	2	2	4	1	3	3	3	3	1	1
University of Illinois		-	17	8	-	13	5	-	8	9	-	21	7	-	19	7	-	23	17	-	23	7

NUCLEAR ENGINEERING - DEGREES GRANTED 1965-1972 (Cont'd)

State and Institution	July-June-	1965-1966			1966-1967			1967-1968			1968-1969			1969-1970			1970-1971			1971-1972		
		B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D
Indiana																						
Purdue University		-	8	4	-	11	8	-	5	10	-	12	5	-	6	10	-	10	5	8	12	4
University of Notre Dame		11	-	-	7	2	1	5	1	2	6	1	1	5	3	1	1	1	1	2	-	-
Iowa																						
Iowa State Univ. of Sci. & Tech.		-	5	4	-	12	6	-	8	7	-	6	9	-	5	10	-	6	4	-	14	7
Kansas																						
Kansas State University		19	7	-	18	5	-	15	5	1	13	6	4	14	3	3	13	5	1	17	11	6
University of Kansas		-	1	-	-	1	-	-	3	-	Program Cancelled											
Kentucky																						
University of Kentucky		-	-	-	-	-	-	1	-	-	6	2	-	4	2	1	3	2	-	-	3	-
Louisiana																						
Louisiana State University		-	-	-	-	-	-	-	-	-	-	2	-	-	2	-	-	2	-	-	3	-
Maryland																						
University of Maryland		-	2	7	-	1	5	-	3	5	-	4	5	-	5	7	6	9	8	6	4	6
Massachusetts																						
Lowell Technological Institute		11	-	-	10	-	-	21	-	-	18	2	-	19	-	-	12	-	-	37	2	-
Massachusetts Inst. of Technology		-	33	15	-	39	22	-	29	13	-	41	14	-	39	22	-	31	14	-	31	21
Michigan																						
University of Michigan		-	14	13	4	23	13	5	21	14	9	18	10	23	19	8	15	20	8	20	9	15
Mississippi																						
Mississippi State University		6	2	-	7	3	-	11	1	-	8	5	-	7	2	-	6	-	-	10	1	-
Missouri																						
University of Missouri - Columbia		-	1	-	-	1	-	-	3	-	-	1	-	-	7	1	-	6	1	-	7	2
- Rolla		9	1	-	4	4	-	5	5	1	4	7	-	7	1	-	11	6	1	8	5	1
Nevada																						
University of Nevada		3	2	-	5	-	-	3	2	-	3	1	-	1	1	-	5	-	-	4	-	-

NUCLEAR ENGINEERING - DEGREES GRANTED 1965-1972 (Cond't)

State and Institution (July-June)	1965-1966 B	M	D	1966-1967 B	M	D	1967-1968 B	M	D	1968-1969 B	M	D	1969-1970 B	M	D	1970-1971 B	M	D	1971-1972 B	M	D
New Jersey																					
Newark College of Engineering	-	-	-	-	1	-	20	-	-	18	-	-	18	1	-	16	-	-	17	-	-
New Mexico																					
University of New Mexico	-	8	2	-	6	1	-	3	1	-	9	2	2	12	4	6	9	4	3	9	2
New York																					
Columbia University	4	11	6	1	11	5	6	8	7	8	4	6	10	10	8	8	7	10	3	8	4
Cornell University	-	7	9	-	6	6	-	6	7	-	-	2	-	5	5	-	6	3	-	9	2
Long Island U-C.W. Post College	-	-	-	-	-	-	-	-	-	-	4	-	-	5	-	-	2	-	Cancelled		
New York University	-	14	3	3	6	3	12	15	-	5	4	2	9	9	1	15	4	1	8	11	1
Rensselaer Polytechnic Institute	-	9	6	6	5	6	8	14	3	16	7	11	10	13	4	9	6	3	20	13	4
SUNY-Buffalo	-	-	-	-	-	-	2	-	-	4	1	-	3	8	-	7	2	-	3	2	-
North Carolina																					
North Carolina State Univ.-Raleigh	19	7	5	14	5	5	8	6	1	19	4	5	19	7	5	29	9	3	21	10	3
Ohio																					
Air Force Inst. of Technology	-	2	-	-	10	-	-	13	-	-	20	1	-	16	1	-	16	1	-	11	3
Case Western Reserve University	-	2	2	-	4	4	-	2	5	-	-	2	-	-	3	-	2	-	-	2	2
Ohio State University	-	1	-	-	7	-	-	4	-	3	4	2	5	16	2	7	8	4	5	6	2
University of Cincinnati	-	8	-	-	9	-	-	5	-	-	4	-	4	8	-	8	7	1	2	14	4
Oklahoma																					
Oklahoma State Univ. of Agriculture and Applied Science													First degree awarded 1971-1972						-	-	1
University of Oklahoma	-	3	1	-	4	1	-	-	-	-	-	-	-	-	-	2	1	-	5	3	-
Oregon																					
Oregon State University	-	-	-	-	-	-	-	2	-	2	3	-	9	2	1	7	2	1	13	2	-
Pennsylvania																					
Carnegie-Mellon University	-	-	1	-	5	2	-	6	1	-	6	4	-	7	1	-	14	5	-	14	5
Pennsylvania State University	-	13	1	-	10	5	-	11	5	2	8	6	5	12	2	16	12	2	12	16	3

NUCLEAR ENGINEERING - DEGREES GRANTED 1965-1972 (cont'd)

State and Institution	July-June	1965-1966			1966-1967			1967-1968			1968-1969			1969-1970			1970-1971			1971-1972		
		B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D
Puerto Rico																						
University of Puerto Rico		-	1	-	-	4	-	-	2	-	-	4	-	-	3	-	-	5	-	-	5	-
Rhode Island																						
University of Rhode Island											First degree awarded 1970-1971						-	2	-	-	-	-
South Carolina																						
University of South Carolina		-	-	-	-	-	-	-	4	-	-	2	-	Program cancelled								
South Dakota																						
South Dakota State University											First degree awarded 1970-1971						1	-	-	-	-	-
Tennessee																						
University of Tennessee		15	4	1	11	2	1	12	10	2	17	10	8	29	4	2	14	7	8	24	3	3
*Vanderbilt University		12	6	2	20	3	-	22	2	-	18	-	1	20	-	-	11	-	-	10	-	-
Texas																						
Texas A&M University		-	7	2	-	6	3	5	6	3	8	8	2	5	3	3	11	6	3	20	5	1
*University of Texas - Austin		-	3	-	-	2	1	-	2	1	-	8	1	-	4	1	-	3	3	20	5	1
Utah																						
University of Utah		6	1	-	5	2	-	7	2	-	7	3	1	8	3	2	21	2	-	22	5	-
Utah State University		8	-	-	8	3	-	9	1	-	9	1	1	13	2	-	9	2	-	7	2	-
Virginia																						
University of Virginia		-	4	1	-	3	2	-	8	3	-	1	2	5	15	7	18	14	2	32	11	3
Virginia Polytechnic Institute		-	4	2	-	4	4	14	1	4	15	1	4	26	1	4	23	1	1	26	5	1
Washington																						
University of Washington		-	10	2	-	8	-	-	8	5	-	6	4	-	10	3	-	20	1	-	10	1
Washington State University		-	-	-	-	-	-	-	-	-	-	2	-	-	1	2	-	2	2	3	2	-

NUCLEAR ENGINEERING - DEGREES GRANTED 1965-1972 (Cont'd)

State and Institution	July-June-	1965 1966			1966 1967			1967 1968			1968 1969			1969 1970			1970 1971			1971 1972		
		B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D
West Virginia																						
West Virginia University		-	3	-	-	2	-	-	2	-	-	1	1	-	1	1	-	-	1	-	-	1
Wisconsin																						
University of Wisconsin		7	10	2	10	10	2	19	13	1	21	17	4	24	7	7	15	10	7	18	15	3
Wyoming																						
University of Wyoming		-	1	-	2	1	-	-	-	-	1	-	-	3	-	-	2	-	-	-	1	-
TOTAL		145	294	122	164	325	137	249	317	146	284	381	153	367	407	181	399	403	171	464	428	149

* Bachelor Degrees estimated

APPENDIX B

ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION
NUCLEAR ENGINEERING

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1972										DEGREES GRANTED JULY 1971 - JUNE 1972		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
ALABAMA													
TUSKEGEE INSTITUTE													
NUCLEAR ENGINEERING							07						
SCHOOL TOTAL	0	0	0	0	0	0	7	0	0	0	0	0	0
STATE TOTAL	0	0	0	0	0	0	7	0	0	0	0	0	0
ARIZONA													
ARIZONA STATE UNIVERSITY													
MECHANICAL WITH NUCLEAR OPTION	05		08				02	01			05	02	
SCHOOL TOTAL	5	0	8	0	0	0	2	1	0	0	5	2	0
UNIVERSITY OF ARIZONA													
NUCLEAR ENGINEERING	20		10				13	02	13	04	08	02	
SCHOOL TOTAL	20	0	10	0	0	0	13	2	13	4	8	2	0
STATE TOTAL	25	0	18	0	0	0	15	3	13	4	13	4	0
CALIFORNIA													
CALIFORNIA STATE UNIVERSITY, SAN JOSE													
MECHANICAL WITH NUCLEAR OPTION	08		08								07		
SCHOOL TOTAL	8	0	8	0	0	0	0	0	0	0	7	0	0
STANFORD UNIVERSITY													
CIVIL WITH NUCLEAR OPTION							01					01	
MECHANICAL WITH NUCLEAR OPTION							12		13			07	01
SCHOOL TOTAL	0	0	0	0	0	0	13	0	13	0	0	8	1
UNIVERSITY OF CALIFORNIA, BERKELEY													
NUCLEAR ENGINEERING							25	02	34	01		28	10
MECHANICAL WITH NUCLEAR OPTION	15										03		
SCHOOL TOTAL	15	0	0	0	0	0	25	2	34	1	3	28	10
UNIVERSITY OF CALIFORNIA, DAVIS													
NUCLEAR SCIENCE, WITH TECHNOLOGY OPTION									06	04			02
SCHOOL TOTAL	0	0	0	0	0	0	0	0	6	4	0	0	2
UNIVERSITY OF CALIFORNIA, LOS ANGELES													
NUCLEAR ENGINEERING							10	01	19	02		09	06
SCHOOL TOTAL	0	0	0	0	0	0	10	1	19	2	0	9	6

ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION
NUCLEAR ENGINEERING

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1972										DEGREES GRANTED JULY 1971 - JUNE 1972		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
UNIVERSITY OF CALIFORNIA, SANTA BARBARA													
NUCLEAR ENGINEERING	09		11								08		
CHEMICAL WITH NUCLEAR OPTION							01					01	
SCHOOL TOTAL	9	0	11	0	0	0	1	0	0	0	8	1	0
STATE TOTAL	32	0	19	0	0	0	49	3	72	7	18	46	19
DISTRICT OF COLUMBIA													
CATHOLIC UNIVERSITY OF AMERICA													
NUCLEAR ENGINEERING	01						01	34	04	16			02
SCHOOL TOTAL	1	0	0	0	0	0	1	34	4	16	0	0	2
HOWARD UNIVERSITY													
MECHANICAL WITH NUCLEAR OPTION							06	02				01	
SCHOOL TOTAL	0	0	0	0	0	0	6	2	0	0	0	1	0
STATE TOTAL	1	0	0	0	0	0	7	36	4	16	0	1	2
FLORIDA													
UNIVERSITY OF FLORIDA													
NUCLEAR ENGINEERING	32		09				21	01	10	05	11	15	01
SCHOOL TOTAL	32	0	9	0	0	0	21	1	10	5	11	15	1
STATE TOTAL	32	0	9	0	0	0	21	1	10	5	11	15	1
GEORGIA													
GEORGIA INSTITUTE OF TECHNOLOGY													
NUCLEAR ENGINEERING							51		14	07		32	07
SCHOOL TOTAL	0	0	0	0	0	0	51	0	14	7	0	32	7
STATE TOTAL	0	0	0	0	0	0	51	0	14	7	0	32	7
IDAHO													
IDAHO STATE UNIVERSITY													
NUCLEAR ENGINEERING							09	01				02	
GENERAL WITH NUCLEAR OPTION	05		07								06		
SCHOOL TOTAL	5	0	7	0	0	0	9	1	0	0	6	2	0
UNIVERSITY OF IDAHO													
CHEMICAL WITH NUCLEAR OPTION	03		05									01	
CIVIL WITH NUCLEAR OPTION											01		
ELECTRICAL WITH NUCLEAR OPTION	01		01									02	
MECHANICAL WITH NUCLEAR OPTION	02		03					01			06		
METALLURGICAL ENGR WITH NUC OPTION			02				01				01		

ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION
NUCLEAR ENGINEERING

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1972										DEGREES GRANTED JULY 1971 - JUNE 1972		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
SCHOOL TOTAL	6	0	11	0	0	0	1	1	0	0	8	3	0
STATE TOTAL	11	0	18	0	0	0	10	2	0	0	14	5	0
ILLINOIS													
NORTHWESTERN UNIVERSITY													
NUCLEAR ENGINEERING							04	02	02		03	01	01
ENGR SCI WITH NUCLEAR OPTION	04		05		01								
SCHOOL TOTAL	4	0	5	0	1	0	4	2	2	0	3	1	1
UNIVERSITY OF ILLINOIS AT URBANA													
NUCLEAR ENGINEERING							36		43	01		23	07
SCHOOL TOTAL	0	0	0	0	0	0	36	0	43	1	0	23	7
STATE TOTAL	4	0	5	0	1	0	40	2	45	1	3	24	8
INDIANA													
PURDUE UNIVERSITY													
NUCLEAR ENGINFERING	17		13				29	01	09		08	12	04
SCHOOL TOTAL	17	0	13	0	0	0	29	1	9	0	8	12	4
UNIVERSITY OF NOTRE DAME													
MECHANICAL WITH NUCLEAR OPTION	05		05				02		01		02		
SCHOOL TOTAL	5	0	5	0	0	0	2	0	1	0	2	0	0
STATE TOTAL	22	0	18	0	0	0	31	1	10	0	10	12	4
IOWA													
IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY													
NUCLEAR ENGINEERING							22	01	10	02		14	07
SCHOOL TOTAL	0	0	0	0	0	0	22	1	10	2	0	14	7
STATE TOTAL	0	0	0	0	0	0	22	1	10	2	0	14	7
KANSAS													
KANSAS STATE UNIVERSITY													
NUCLEAR ENGINEERING	32		29				13		11	01	17	11	06
SCHOOL TOTAL	32	0	29	0	0	0	13	0	11	1	17	11	6
STATE TOTAL	32	0	29	0	0	0	13	0	11	1	17	11	6

ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION
NUCLEAR ENGINEERING

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1972										DEGREES GRANTED JULY 1971 - JUNE 1972		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
KENTUCKY													
UNIVERSITY OF KENTUCKY													
NUCLEAR ENGINEERING							04					03	
ELECTRICAL WITH NUCLEAR OPTION			01										
MECHANICAL WITH NUCLEAR OPTION			04				01		01				
SCHOOL TOTAL	0	0	5	0	0	0	5	0	1	0	0	3	0
STATE TOTAL	0	0	5	0	0	0	5	0	1	0	0	3	0
LOUISIANA													
LOUISIANA STATE UNIVERSITY, BATON ROUGE													
NUCLEAR ENGINEERING							10	01				03	
ENGR SCI WITH NUCLEAR OPTION	08		08										
INDUSTRIAL TECHNOLOGY WITH NUCLEAR OPTION	05		05										
SCHOOL TOTAL	13	0	13	0	0	0	10	1	0	0	0	3	0
STATE TOTAL	13	0	13	0	0	0	10	1	0	0	0	3	0
MARYLAND													
UNIVERSITY OF MARYLAND, COLLEGE PARK													
NUCLEAR ENGINEERING	08		06					02	08	11		02	06
CHEMICAL WITH NUCLEAR OPTION	06		04				01	01	01	02	03	02	
CIVIL WITH NUCLEAR OPTION	01		01										
ELECTRICAL WITH NUCLEAR OPTION	06		10								03		
MECHANICAL WITH NUCLEAR OPTION	03		04										
SCHOOL TOTAL	24	0	25	0	0	0	1	3	9	13	6	4	6
STATE TOTAL	24	0	25	0	0	0	1	3	9	13	6	4	6
MASSACHUSETTS													
LOWELL TECHNOLOGICAL INSTITUTE													
NUCLEAR ENGINEERING	28		47				10				37	02	
SCHOOL TOTAL	20	0	47	0	0	0	10	0	0	0	37	2	0
MASSACHUSETTS INSTITUTE OF TECHNOLOGY													
NUCLEAR ENGINEERING							53		60			31	21
SCHOOL TOTAL	0	0	0	0	0	0	53	0	60	0	0	31	21
STATE TOTAL	28	0	47	0	0	0	63	0	60	0	37	33	21
MICHIGAN													
UNIVERSITY OF MICHIGAN													
NUCLEAR ENGINEERING	29		26				25		49	02	20	09	15
SCHOOL TOTAL	29	0	26	0	0	0	25	0	49	2	20	9	15

ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION
NUCLEAR ENGINEERING

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1972										DEGREES GRANTED JULY 1971 - JUNE 1972		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
STATE TOTAL	29	0	26	0	0	0	25	0	49	2	20	9	15
MISSISSIPPI													
MISSISSIPPI STATE UNIVERSITY													
NUCLEAR ENGINEERING	17		14				02	01			10	01	
SCHOOL TOTAL	17	0	14	0	0	0	2	1	0	0	10	1	0
STATE TOTAL	17	0	14	0	0	0	2	1	0	0	10	1	0
MISSOURI													
UNIVERSITY OF MISSOURI, COLUMBIA													
NUCLEAR ENGINEERING							16	01	09	07		07	02
CHEMICAL WITH NUCLEAR OPTION			01										
ELECTRICAL WITH NUCLEAR OPTION	10		25										
MECHANICAL WITH NUCLEAR OPTION	10		15										
SCHOOL TOTAL	20	0	41	0	0	0	16	1	9	7	0	7	2
UNIVERSITY OF MISSOURI, ROLLA													
NUCLEAR ENGINEERING	11		16				13		03	03	08	05	01
SCHOOL TOTAL	11	0	16	0	0	0	13	0	3	3	8	5	1
STATE TOTAL	31	0	57	0	0	0	29	1	12	10	8	12	3
NEVADA													
UNIVERSITY OF NEVADA, RENO													
ENGR SCI WITH NUCLEAR OPTION	03		02								04		
SCHOOL TOTAL	3	0	2	0	0	0	0	0	0	0	4	0	0
STATE TOTAL	3	0	2	0	0	0	0	0	0	0	4	0	0
NEW JERSEY													
NEWARK COLLEGE OF ENGINEERING													
CHEMICAL WITH NUCLEAR OPTION	01		03										
ELECTRICAL WITH NUCLEAR OPTION	02		18								13		
MECHANICAL WITH NUCLEAR OPTION	01		11								04		
SCHOOL TOTAL	4	0	32	0	0	0	0	0	0	0	17	0	0
STATE TOTAL	4	0	32	0	0	0	0	0	0	0	17	0	0
NEW MEXICO													
UNIVERSITY OF NEW MEXICO													
NUCLEAR ENGINEERING							17	20	07	06		09	02
ELECTRICAL WITH NUCLEAR OPTION	02		02								02		

ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION
NUCLEAR ENGINEERING

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1972										DEGREES GRANTED JULY 1971 - JUNE 1972		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
MECHANICAL WITH NUCLEAR OPTION	03		02								01		
SCHOOL TOTAL	5	0	4	0	0	0	17	20	7	6	3	9	2
STATE TOTAL	5	0	4	0	0	0	17	20	7	6	3	9	2
NEW YORK													
COLUMBIA UNIVERSITY													
NUCLEAR ENGINEERING	02		05				07	06	13		02	08	01
PLASMA PHYSICS APPLIED WITH NUCLEAR OPTION									10				03
SCHOOL TOTAL	2	0	5	0	0	0	7	6	23	0	2	8	4
CORNELL UNIVERSITY													
NUCLEAR ENGINEERING							09	01	07			09	02
SCHOOL TOTAL	0	0	0	0	0	0	9	1	7	0	0	9	2
NEW YORK UNIVERSITY													
NUCLEAR ENGINEERING	06		03		07		06	24	07	05	08	11	01
SCHOOL TOTAL	6	0	3	0	7	0	6	24	7	5	8	11	1
RENSSELAER POLYTECHNIC INSTITUTE													
NUCLEAR ENGINEERING	17		17				17	02	13	07	20	13	04
ENVIRONMENTAL ENGR							01						
SCHOOL TOTAL	17	0	17	0	0	0	18	2	13	7	20	13	4
STATE UNIVERSITY AT BUFFALO													
NUCLEAR ENGINEERING			08				06				03	02	
SCHOOL TOTAL	0	0	8	0	0	0	6	0	0	0	3	2	0
STATE TOTAL	25	0	33	0	7	0	46	33	50	12	33	43	11
NORTH CAROLINA													
NORTH CAROLINA STATE UNIVERSITY AT RALEIGH													
NUCLEAR ENGINEERING	36		28		01		23		10		21	10	03
SCHOOL TOTAL	36	0	28	0	1	0	23	0	10	0	21	10	3
STATE TOTAL	36	0	28	0	1	0	23	0	10	0	21	10	3
OHIO													
AIR FORCE INSTITUTE OF TECHNOLOGY													
NUCLEAR ENGINEERING							14					11	
AEROSPACE WITH NUC MAJOR									05				03

ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION
NUCLEAR ENGINEERING

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1972										DEGREES GRANTED JULY 1971 - JUNE 1972		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
SCHOOL TOTAL	0	0	0	0	0	0	14	0	5	0	0	11	3
CASE WESTERN RESERVE UNIVERSITY													
PLASMA PHYSICS APPLIED WITH NUCLEAR OPTION							05		04			02	02
SCHOOL TOTAL	0	0	0	0	0	0	5	0	4	0	0	2	2
OHIO STATE UNIVERSITY													
NUCLEAR ENGINEERING							17	04	16	09		06	02
CHEMICAL WITH NUCLEAR OPTION	01		01								01		
MECHANICAL WITH NUCLEAR OPTION	01		01						02		01		
ENGR PHYSICS WITH NUC OPTION	03		03								03		
SCHOOL TOTAL	5	0	5	0	0	0	17	4	18	9	5	6	2
UNIVERSITY OF CINCINNATI													
NUCLEAR ENGINEERING	05		01				07	11	06	04		14	04
CHEMICAL WITH NUCLEAR OPTION					01						02		
SCHOOL TOTAL	5	0	1	0	1	0	7	11	6	4	2	14	4
STATE TOTAL	10	0	6	0	1	0	43	15	33	13	7	33	11
OKLAHOMA													
OKLAHOMA STATE UNIVERSITY													
GENERAL WITH NUCLEAR OPTION										01			01
SCHOOL TOTAL	0	0	0	0	0	0	0	0	0	1	0	0	1
UNIVERSITY OF OKLAHOMA													
NUCLEAR ENGINEERING	10		03				02		02		04	02	
ENGR PHYSICS WITH NUC OPTION			04								01	01	
SCHOOL TOTAL	10	0	7	0	0	0	2	0	2	0	5	3	0
STATE TOTAL	10	0	7	0	0	0	2	0	2	1	5	3	1
OREGON													
OREGON STATE UNIVERSITY													
NUCLEAR ENGINEERING	17		10				08		02	02	12	02	
NUC ENGINEERING TECHNOLOGY	14	05	08								01		
SCHOOL TOTAL	25	5	18	0	0	0	8	0	2	2	13	2	0
STATE TOTAL	25	5	18	0	0	0	8	0	2	2	13	2	0

ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION
NUCLEAR ENGINEERING

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1972										DEGREES GRANTED JULY 1971 - JUNE 1972		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
PENNSYLVANIA													
CARNEGIE-MELLON UNIVERSITY													
NUCLEAR ENGINEERING							04	24	10	21		14	05
SCHOOL TOTAL	0	0	0	0	0	0	4	24	10	21	0	14	5
PENNSYLVANIA STATE UNIVERSITY													
NUCLEAR ENGINEERING	18		21				27	03	10	03	12	16	03
SCHOOL TOTAL	18	0	21	0	0	0	27	3	10	3	12	16	3
STATE TOTAL	18	0	21	0	0	0	31	27	20	24	12	30	8
PUERTO RICO													
UNIVERSITY OF PUERTO RICO, MAYAGUEZ													
NUCLEAR ENGINEERING							10					05	
SCHOOL TOTAL	0	0	0	0	0	0	10	0	0	0	0	5	0
STATE TOTAL	0	0	0	0	0	0	10	0	0	0	0	5	0
RHODE ISLAND													
UNIVERSITY OF RHODE ISLAND													
NUCLEAR ENGINEERING							02						
OCEAN WITH NUC OPTION									01	01			
SCHOOL TOTAL	0	0	0	0	0	0	2	0	1	1	0	0	0
STATE TOTAL	0	0	0	0	0	0	2	0	1	1	0	0	0
SOUTH DAKOTA													
SOUTH DAKOTA STATE UNIVERSITY													
MECHANICAL WITH NUCLEAR OPTION			02										
SCHOOL TOTAL	0	0	2	0	0	0	0	0	0	0	0	0	0
STATE TOTAL	0	0	2	0	0	0	0	0	0	0	0	0	0
TENNESSEE													
UNIVERSITY OF TENNESSEE, KNOXVILLE													
NUCLEAR ENGINEERING	28		16				15	11	09	05	24	03	03
SCHOOL TOTAL	28	0	16	0	0	0	15	11	9	5	24	3	3
VANDERBILT UNIVERSITY													
CIVIL WITH NUCLEAR OPTION	01										02		
MECHANICAL WITH NUCLEAR OPTION	03		04								06		
ENGR SCI WITH NUCLEAR OPTION	01		01								02		
SCHOOL TOTAL	5	0	5	0	0	0	0	0	0	0	10	0	0

ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION
NUCLEAR ENGINEERING

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1972										DEGREES GRANTED		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE		JULY 1971 - JUNE 1972		
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
STATE TOTAL	33	0	21	0	0	0	15	11	9	5	34	3	3
TEXAS													
TEXAS A & M UNIVERSITY													
NUCLEAR ENGINEERING	33		33	02			25	02	08	03	20	05	01
SCHOOL TOTAL	33	0	33	2	0	0	25	2	8	3	20	5	1
UNIV OF TEXAS AT AUSTIN													
NUCLEAR ENGINEERING												05	01
MECHANICAL WITH NUCLEAR OPTION	20		20								20		
SCHOOL TOTAL	20	0	20	0	0	0	0	0	0	0	20	5	1
STATE TOTAL	53	0	53	2	0	0	25	2	8	3	40	10	2
UTAH													
UNIVERSITY OF UTAH													
NUCLEAR ENGINEERING							03		01			05	
CHEMICAL WITH NUCLEAR OPTION			04								02		
ELECTRICAL WITH NUCLEAR OPTION			08								06		
MECHANICAL WITH NUCLEAR OPTION			15	03							14		
SCHOOL TOTAL	0	0	27	3	0	0	3	0	1	0	22	5	0
UTAH STATE UNIVERSITY													
MECHANICAL WITH NUCLEAR OPTION	04		03				02				07	02	
SCHOOL TOTAL	4	0	3	0	0	0	2	0	0	0	7	2	0
STATE TOTAL	4	0	30	3	0	0	5	0	1	0	29	7	0
VIRGINIA													
UNIVERSITY OF VIRGINIA													
NUCLEAR ENGINEERING	20		29		06		13	01	10	06	32	11	03
SCHOOL TOTAL	20	0	29	0	6	0	16	1	10	6	32	11	3
VIRGINIA POLYTECHNIC INSTITUTE													
NUCLEAR ENGINEERING							14	22	04	01		05	01
CHEMICAL WITH NUCLEAR OPTION	02		01								01		
CIVIL WITH NUCLEAR OPTION			01										
ELECTRICAL WITH NUCLEAR OPTION	14		10								11		
MECHANICAL WITH NUCLEAR OPTION	20		19								14		
SCHOOL TOTAL	36	0	31	0	0	0	14	22	4	1	26	5	1
STATE TOTAL	56	0	60	0	6	0	30	23	14	7	58	16	4

ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION
NUCLEAR ENGINEERING

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1972										DEGREES GRANTED JULY 1971 - JUNE 1972		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
WASHINGTON													
UNIVERSITY OF WASHINGTON													
NUCLEAR ENGINEERING							35	06	10	05		10	01
SCHOOL TOTAL	0	0	0	0	0	0	35	6	10	5	0	10	1
WASHINGTON STATE UNIVERSITY													
NUCLEAR ENGINEERING								01				02	
CHEMICAL WITH NUCLEAR OPTION	02		02								02		
ELECTRICAL WITH NUCLEAR OPTION			04								01		
MECHANICAL WITH NUCLEAR OPTION			01										
ENGR & ENVIRONMENTAL SCI WITH NUC OPTION			02							01			
SCHOOL TOTAL	2	0	9	0	0	0	0	1	0	1	3	2	0
STATE TOTAL	2	0	9	0	0	0	35	7	10	6	3	12	1
WEST VIRGINIA													
WEST VIRGINIA UNIVERSITY													
NUCLEAR ENGINEERING													01
SCHOOL TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	1
STATE TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	1
WISCONSIN													
UNIVERSITY OF WISCONSIN, MADISON													
NUCLEAR ENGINEERING	40		31				24	01	22	02	18	15	03
SCHOOL TOTAL	40	0	31	0	0	0	24	1	22	2	18	15	3
STATE TOTAL	40	0	31	0	0	0	24	1	22	2	18	15	3
WYOMING													
UNIVERSITY OF WYOMING													
MECHANICAL WITH NUCLEAR OPTION	03		02									01	
SCHOOL TOTAL	3	0	2	0	0	0	0	0	0	0	0	1	0
STATE TOTAL	3	0	2	0	0	0	0	0	0	0	0	1	0
GRAND TOTAL	628	5	662	5	16	0	717	194	509	150	464	428	149
FOREIGN NATIONALS-ALL CURRICULA (INCLUDED IN GRAND TOTAL)	15	0	18	0	0	0	13[illegible]	[illegible]3	170	11	15	58	38

APPENDIX C

ENROLLMENTS AND DEGREES BY SUBFIELDS
NUCLEAR ENGINEERING

CURRICULUM OR OPTION	ENROLLMENTS FALL 1972					DEGREES GRANTED JULY 1971 - JUNE 1972		
	UNDERGRAD 3 RD YEAR	UNDERGRAD 4 TH YEAR	UNDERGRAD 5 TH YEAR	MASTER	DOCTORATE	DEGREES BACHELOR	DEGREES MASTERS	DEGREES DOCTORATE
NUCLEAR ENGINEERING	430	388	14	871	606	306	40[illegible]	137
CHEMICAL WITH NUCLEAR OPTION	15	21	1	3	3	11	4	0
CIVIL WITH NUCLEAR OPTION	2	2	0	1	0	3	1	0
ELECTRICAL WITH NUCLEAR OPTION	35	79	0	0	0	36	2	0
MECHANICAL WITH NUCLEAR OPTION	103	130	0	29	17	90	[illegible]	1
NUCLEAR SCIENCE, WITH TECHNOLOGY OPTION	0	0	0	0	10	0	0	[illegible]
GENERAL WITH NUCLEAR OPTION	5	7	0	0	1	6	0	1
ENGR SCI WITH NUCLEAR OPTION	16	16	1	0	0	6	0	0
INDUSTRIAL TECHNOLOGY WITH NUCLEAR OPTION	5	5	0	0	0	0	0	0
PLASMA PHYSICS APPLIED WITH NUCLEAR OPTION	0	0	0	5	14	0	2	5
ENGR PHYSICS WITH NUC OPTION	3	7	0	0	0	4	1	0
ENGR & ENVIRONMENTAL SCI WITH NUC OPTION	0	2	0	0	1	0	0	0
NUC ENGINEERING TECHNOLOGY	19	8	0	0	0	1	0	0
OCEAN WITH NUC OPTION	0	0	0	0	2	0	0	0
AEROSPACE WITH NUC MAJOR	0	0	0	0	5	3	0	3
METALLURGICAL ENGR WITH NUC OPTION	0	2	0	1	0	1	0	0
ENVIRONMENTAL ENGR	0	0	0	1	0	0	0	0
GRAND TOTAL	633	667	16	911	659	464	428	149

APPENDIX D

NUCLEAR ENGINEERING
INSTITUTIONS WITHIN SUBFIELDS
FALL 1972

CURRICULUM OR OPTION	INSTITUTION
NUCLEAR ENGINEERING	
	AIR FORCE INSTITUTE OF TECHNOLOGY
	CARNEGIE-MELLON UNIVERSITY
	CATHOLIC UNIVERSITY OF AMERICA
	COLUMBIA UNIVERSITY
	CORNELL UNIVERSITY
	GEORGIA INSTITUTE OF TECHNOLOGY
	IDAHO STATE UNIVERSITY
	IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY
	KANSAS STATE UNIVERSITY
	LOUISIANA STATE UNIVERSITY, BATON ROUGE
	LOWELL TECHNOLOGICAL INSTITUTE
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY
	MISSISSIPPI STATE UNIVERSITY
	NEW YORK UNIVERSITY
	NORTH CAROLINA STATE UNIVERSITY AT RALEIGH
	NORTHWESTERN UNIVERSITY
	OHIO STATE UNIVERSITY
	OREGON STATE UNIVERSITY
	PENNSYLVANIA STATE UNIVERSITY
	PURDUE UNIVERSITY
	RENSSELAER POLYTECHNIC INSTITUTE
	STATE UNIVERSITY AT BUFFALO
	TEXAS A & M UNIVERSITY
	TUSKEGEE INSTITUTE
	UNIV OF TEXAS AT AUSTIN
	UNIVERSITY OF ARIZONA
	UNIVERSITY OF CALIFORNIA, BERKELEY
	UNIVERSITY OF CALIFORNIA, LOS ANGELES
	UNIVERSITY OF CALIFORNIA, SANTA BARBARA
	UNIVERSITY OF CINCINNATI
	UNIVERSITY OF FLORIDA
	UNIVERSITY OF ILLINOIS AT URBANA
	UNIVERSITY OF KENTUCKY
	UNIVERSITY OF MARYLAND, COLLEGE PARK
	UNIVERSITY OF MICHIGAN
	UNIVERSITY OF MISSOURI, COLUMBIA
	UNIVERSITY OF MISSOURI, ROLLA
	UNIVERSITY OF NEW MEXICO
	UNIVERSITY OF OKLAHOMA
	UNIVERSITY OF PUERTO RICO, MAYAGUEZ
	UNIVERSITY OF RHODE ISLAND
	UNIVERSITY OF TENNESSEE, KNOXVILLE
	UNIVERSITY OF UTAH
	UNIVERSITY OF VIRGINIA
	UNIVERSITY OF WASHINGTON
	UNIVERSITY OF WISCONSIN, MADISON
	VIRGINIA POLYTECHNIC INSTITUTE
	WASHINGTON STATE UNIVERSITY
	WEST VIRGINIA UNIVERSITY

NUCLEAR ENGINEERING
INSTITUTIONS WITHIN SUBFIELDS
FALL 1972

CURRICULUM OR OPTION	INSTITUTION
CHEMICAL WITH NUCLEAR OPTION	
	NEWARK COLLEGE OF ENGINEERING
	OHIO STATE UNIVERSITY
	UNIVERSITY OF CALIFORNIA, SANTA BARBARA
	UNIVERSITY OF CINCINNATI
	UNIVERSITY OF IDAHO
	UNIVERSITY OF MARYLAND, COLLEGE PARK
	UNIVERSITY OF MISSOURI, COLUMBIA
	UNIVERSITY OF UTAH
	VIRGINIA POLYTECHNIC INSTITUTE
	WASHINGTON STATE UNIVERSITY
CIVIL WITH NUCLEAR OPTION	
	STANFORD UNIVERSITY
	UNIVERSITY OF IDAHO
	UNIVERSITY OF MARYLAND, COLLEGE PARK
	VANDERBILT UNIVERSITY
	VIRGINIA POLYTECHNIC INSTITUTE
ELECTRICAL WITH NUCLEAR OPTION	
	NEWARK COLLEGE OF ENGINEERING
	UNIVERSITY OF IDAHO
	UNIVERSITY OF KENTUCKY
	UNIVERSITY OF MARYLAND, COLLEGE PARK
	UNIVERSITY OF MISSOURI, COLUMBIA
	UNIVERSITY OF NEW MEXICO
	UNIVERSITY OF UTAH
	VIRGINIA POLYTECHNIC INSTITUTE
	WASHINGTON STATE UNIVERSITY
MECHANICAL WITH NUCLEAR OPTION	
	ARIZONA STATE UNIVERSITY
	CALIFORNIA STATE UNIVERSITY, SAN JOSE
	HOWARD UNIVERSITY
	NEWARK COLLEGE OF ENGINEERING
	OHIO STATE UNIVERSITY
	SOUTH DAKOTA STATE UNIVERSITY
	STANFORD UNIVERSITY
	UNIV OF TEXAS AT AUSTIN
	UNIVERSITY OF CALIFORNIA, BERKELEY
	UNIVERSITY OF IDAHO
	UNIVERSITY OF KENTUCKY
	UNIVERSITY OF MARYLAND, COLLEGE PARK
	UNIVERSITY OF MISSOURI, COLUMBIA
	UNIVERSITY OF NEW MEXICO

NUCLEAR ENGINEERING
INSTITUTIONS WITHIN SUBFIELDS
FALL 1972

CURRICULUM OR OPTION	INSTITUTION
MECHANICAL WITH NUCLEAR OPTION	
	UNIVERSITY OF NOTRE DAME
	UNIVERSITY OF UTAH
	UNIVERSITY OF WYOMING
	UTAH STATE UNIVERSITY
	VANDERBILT UNIVERSITY
	VIRGINIA POLYTECHNIC INSTITUTE
	WASHINGTON STATE UNIVERSITY
GENERAL WITH NUCLEAR OPTION	
	IDAHO STATE UNIVERSITY
	OKLAHOMA STATE UNIVERSITY
NUCLEAR SCIENCE, WITH TECHNOLOGY OPTION	
	UNIVERSITY OF CALIFORNIA, DAVIS
ENGR SCI WITH NUCLEAR OPTION	
	LOUISIANA STATE UNIVERSITY, BATON ROUGE
	NORTHWESTERN UNIVERSITY
	UNIVERSITY OF NEVADA, RENO
	VANDERBILT UNIVERSITY
INDUSTRIAL TECHNOLOGY WITH NUCLEAR OPTION	
	LOUISIANA STATE UNIVERSITY, BATON ROUGE
PLASMA PHYSICS APPLIED WITH NUCLEAR OPTION	
	CASE WESTERN RESERVE UNIVERSITY
	COLUMBIA UNIVERSITY
ENGR PHYSICS WITH NUC OPTION	
	OHIO STATE UNIVERSITY
	UNIVERSITY OF OKLAHOMA
ENGR & ENVIRONMENTAL SCI WITH NUC OPTION	
	WASHINGTON STATE UNIVERSITY

NUCLEAR ENGINEERING
INSTITUTIONS WITHIN SUBFIELDS
FALL 1972

CURRICULUM OR OPTION	INSTITUTION
NUC ENGINEERING TECHNOLOGY	OREGON STATE UNIVERSITY
OCEAN WITH NUC OPTION	UNIVERSITY OF RHODE ISLAND
AEROSPACE WITH NUC MAJOR	AIR FORCE INSTITUTE OF TECHNOLOGY
METALLURGICAL ENGR WITH NUC OPTION	UNIVERSITY OF IDAHO
ENVIRONMENTAL ENGR	RENSSELAER POLYTECHNIC INSTITUTE

APPENDIX E

UNITED STATES

ATOMIC ENERGY COMMISSION

WASHINGTON, D.C. 20545

Dear Sir:

We appreciate the outstanding response to our first Nuclear Engineering Enrollment and Degree Survey. Enclosed are some of the data produced by this survey, and you will be sent a copy of the full report within a few weeks when it is printed. Meanwhile, your cooperation in completing the current survey is requested, so that we may start producing this much needed data in the proper cycle, which includes collection of data in the fall and publication in January each year.

Many respondents to our first survey requested additional information regarding the placement of degree recipients. Therefore, we are including a supplementary form to collect this data with a breakout of those who returned to previously held positions. Potential employers are also interested in this information.

A self-addressed, franked envelope for your convenience and an extra set of forms for your records are enclosed. We would appreciate your reply by November 20, 1972, and we hope to be able to send you the results early in 1973. Questions concerning the survey may be directed to the Manpower and Appraisal Branch of this Division (301-973-4293). Thank you for your cooperation.

Sincerely,

Elliot S. Pierce, Director
Division of Nuclear Education
and Training

Enclosures.

Form AEC 616
(5-72)

• Important: Please see instructions on reverse before completing this form.

OMB No. 38-R0176
Approval Expires March 1977

U.S. Atomic Energy Commission

NUCLEAR ENGINEERING

Enrollment and Degree Survey

Name of Institution (*Include City, State, Zip Code*)

Typed Name and Title of Official Supplying Data

Telephone No.

Department(s) Reporting

Curriculum or Option (See Instr. a) (*Write in those not listed*) ENGINEERS (1)	ENROLLMENTS FALL 19									DEGREES GRANTED July 19___ – June 19___		
	Undergraduates					Master Candidates		Doctorate Candidates				
	3rd Year (2)	4th Year (3)	5th Year (4)	Full-Time (Instr. b) (5)	Part Time (6)	Full-Time (7)	Part-Time (8)	Full-Time (9)	Part-Time (10)	Bachelor (11)	Master (12)	Doctorate (13)
Nuclear												
Chemical, with nuclear option												
Civil, with nuclear option												
Electrical, with nuclear option												
Industrial, with nuclear option												
Mechanical, with nuclear option												
Other (*Specify*)												
TOTAL												
• Please break out the following from the totals reported above – (See Instr. f)												
Foreign Nationals–All Curricula												

Data supplied above may be published in listings by individual institutions.

Authorized Signature *Date*

Remarks

Nuclear Engineering Degree Survey Supplement

Reporting Institution _____ Date _____

Please indicate placement of degree recipients reported on AEC Form 616:

Placement or plans after graduation (Please show in paren. numbers returning to previously held positions)	Degree Recipients July 1971-June 1972		
	Bachelor	Master	Doctor
a. Further study			
b. Academic employment (students employed part time should be shown in a.)			
c. U. S. Government employment			
d. GOCO (Gov.-owned, Contractor-operated installations) employment			
e. State and Local Government employment			
f. Industry employment			
g. Military service			
h. Unknown			